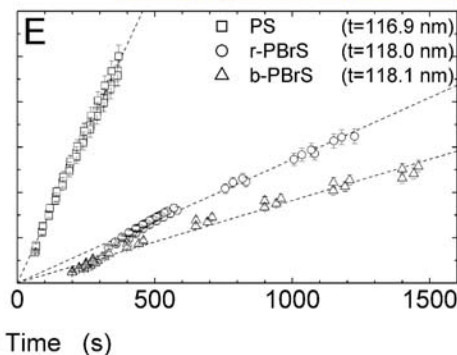
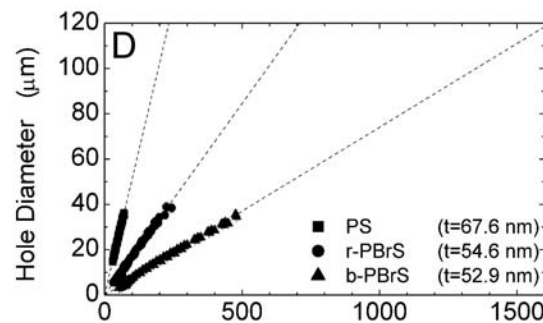
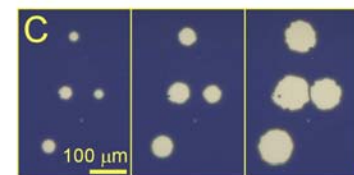
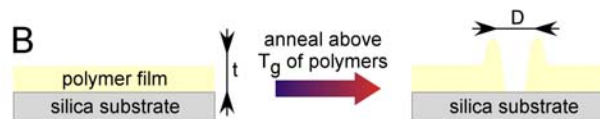
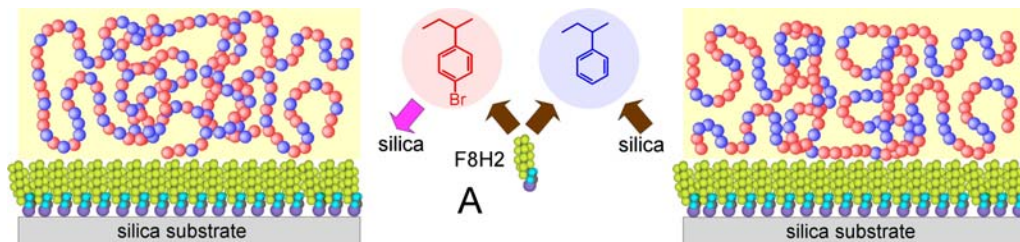


Preparation and properties of random-blocky copolymers

Random-blocky poly(styrene-co-4-bromostyrene) copolymers (RBC) prepared by bromination of parent polystyrene in selective solvents.

By variation solvent quality and bromination leads to either "random" or random-blocky distributions of 4-bromostyrene

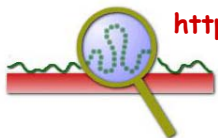


Results:

A series of RBC prepared and the distribution of the 4-bromostyrene determined by means of Kerr effect measurement.

Initial experiments aiming exploring the interfacial activity of the RBC performed, which involved dewetting studies as a function of the degree of blockiness.

The assembly of RBC at interfaces depends crucially on the degree of blockiness in the RBC. RBC with more blocky character are "stapled" to the interface by their sticky groups more efficiently than their random counterparts.



Outreach activities



Summer camp for senior high-schoolers

In the summer 2004, the PI has helped to co-organize engineering summer camp at NCSU for talented high school seniors.

He and three other colleagues prepared a series of lectures on various aspects of materials and chemical engineering and have also involved the high school students in hands-on experiments involving polymers, colloids, and various biological species.

Kenan Fellows curriculum and leadership

The PI has acted as an adviser to a high school teacher from Durham county through the Kenan Fellows for Curriculum and Leadership development Program at NC State University.

He is assisting the teacher in developing new chemistry educational tools that involve web based lectures moduli and chemistry labs.

The Kenan Fellows for Curriculum and Leadership development Program aims at promoting teacher leadership, address teacher retention, and advance K-12 science, technology and mathematics education.

Kenan Fellows
CURRICULUM AND
LEADERSHIP DEVELOPMENT

